FAST ETHERNET RACKMOUNT WEB-SMART SWITCH

WITH OPTIONAL GIGABIT PORTS

USER MANUAL

MODEL 505093

INTELLINET
NETWORK SOLUTIONS

INT-505093-UM-0906-01

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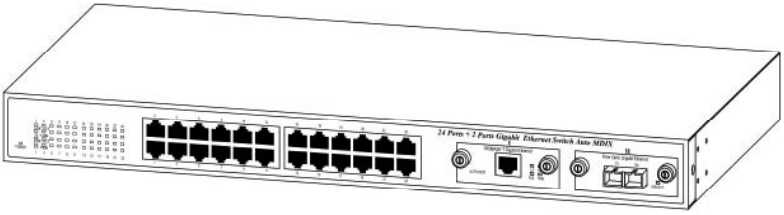
1. INTRODUCTION & FEATURES

Thank you for your purchase of the INTELLINET NETWORK SOLUTIONS™ Fast Ethernet Rackmount Web-Smart Switch with Optional Gigabit Ports, Model 505093. Following is an introductory overview of the Web-Smart Switch features.

- Supports real-time status read/write operation.
- Provides online link status.
- Supports port setting for NWay or force-mode operation.
- One port-based trunk supports speeds up to 800 Mbps.
- Supports load balancing on the trunking port.
- Optional fiber-optic module for 100Base-FX application.



Optional Gigabit Ports (modules not included)

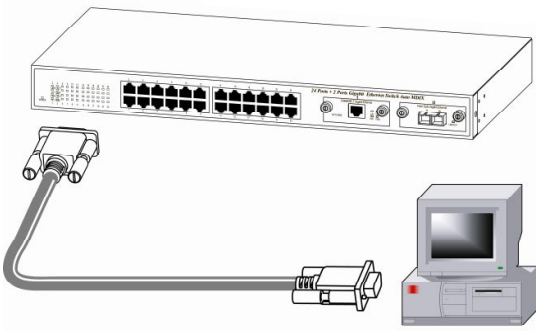
2. HARDWARE INSTALLATION

Accessories

- One null modem cable
- One D-sub 9-pin female connector on front panel
- Fiber module (optional) multimodule/single module (ST- or SC-type connector)

Turn off the power to your PC and Fast Ethernet Rackmount Web-Smart Switch, then connect the null modem cable to the PC serial port and the Smart Switch D-sub connector.

NOTE: When you connect the cable, remember which serial port you used. (Refer to Step 3 of Section 3.)



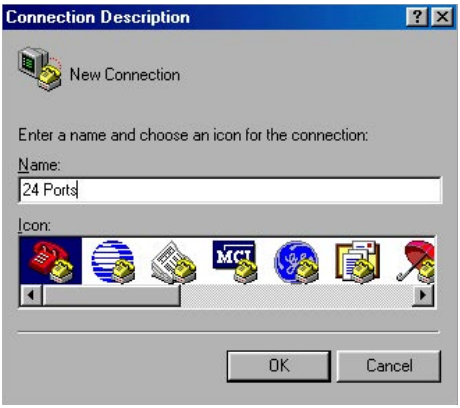
3. SOFTWARE SETTINGS

To open the HyperTerminal program, follow the steps below.

1. Click "Start," then "Programs," then "Accessories," then "Communications," then "HyperTerminal."

HyperTerminal
by Hilgraeve Monroe, Michigan USA
For more power and convenience, upgrade to hot new HyperACCESS for Windows 95 and NT, TODAY!
Developed for Microsoft by Hilgraeve Inc.
Upgrade Info...
Copyright 1998 Hilgraeve Inc.

2. Enter any name you care to on the New Connection screen, then click "OK."



3. In the "Connect using" field, enter the serial port where you connected the null modem cable to the PC.

4. On the Properties page, fill in the fields as shown below, then click "OK."

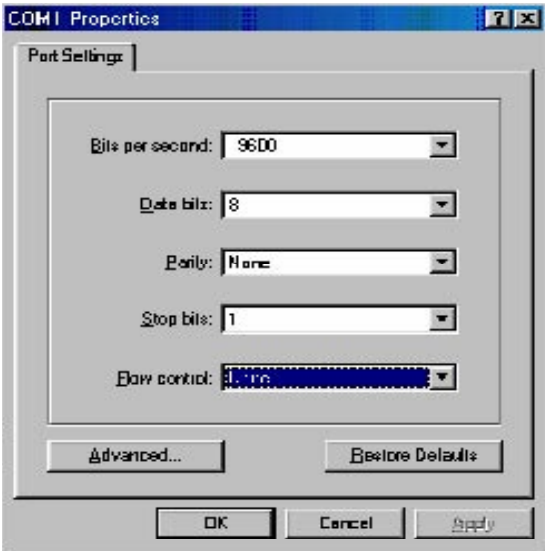
   Bits per second: 9600

   Data bits: 8

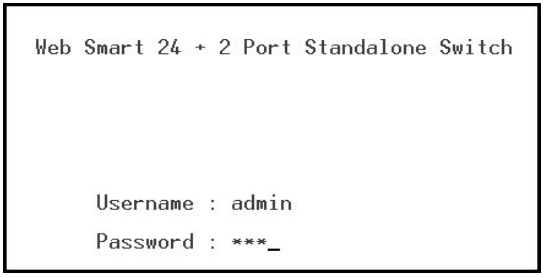
   Parity: None

   Stop bits: 1

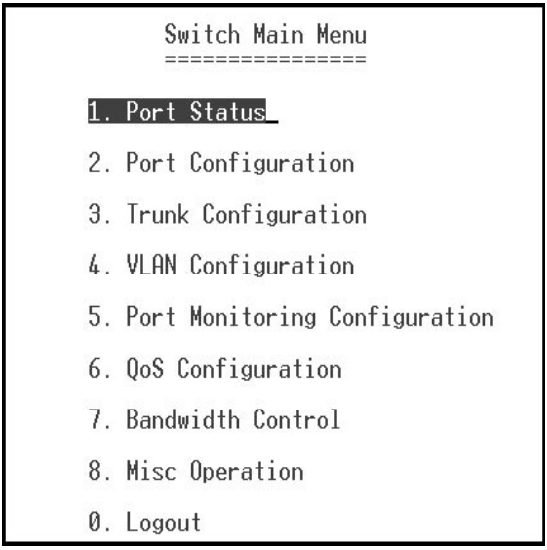
   Flow control: None



5. When you see the blinking cursor on the next screen, press any key for the default settings of "admin" for the username and "123" for the password.



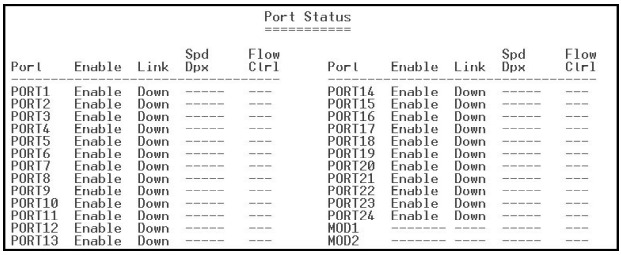
6. When you see this screen, the PC configuration is complete.



4. FUNCTIONS & CONFIGURATIONS

Port Status

This screen displays the current status of each of the ports: enabled/disabled, link up/down, speed/duplex and flow control.

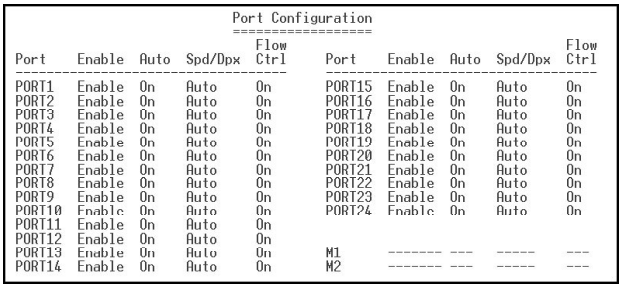


Port Status

Port	Enable	Link	Spd Dpx	Flow Ctrl	Port	Enable	Link	Spd Dpx	Flow Ctrl
PORT1	Enable	Down	-----	---	PORT14	Enable	Down	-----	---
PORT2	Enable	Down	-----	---	PORT15	Enable	Down	-----	---
PORT3	Enable	Down	-----	---	PORT16	Enable	Down	-----	---
PORT4	Enable	Down	-----	---	PORT17	Enable	Down	-----	---
PORT5	Enable	Down	-----	---	PORT18	Enable	Down	-----	---
PORT6	Enable	Down	-----	---	PORT19	Enable	Down	-----	---
PORT7	Enable	Down	-----	---	PORT20	Enable	Down	-----	---
PORT8	Enable	Down	-----	---	PORT21	Enable	Down	-----	---
PORT9	Enable	Down	-----	---	PORT22	Enable	Down	-----	---
PORT10	Enable	Down	-----	---	PORT23	Enable	Down	-----	---
PORT11	Enable	Down	-----	---	PORT24	Enable	Down	-----	---
PORT12	Enable	Down	-----	---	MOD1	-------	----	-----	---
PORT13	Enable	Down	-----	---	MOD2	-------	----	-----	---

Port Configuration

On this screen, you're able to configure the enable state, auto-negotiation, speed/duplex and flow control for each port.

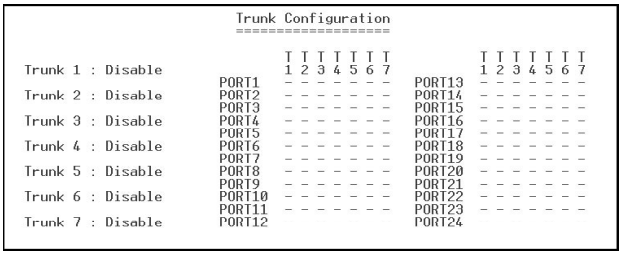


Port Configuration

Port	Enable	Auto	Spd/Dpx	Flow Ctrl	Port	Enable	Auto	Spd/Dpx	Flow Ctrl
PORT1	Enable	On	Auto	On	PORT15	Enable	On	Auto	On
PORT2	Enable	On	Auto	On	PORT16	Enable	On	Auto	On
PORT3	Enable	On	Auto	On	PORT17	Enable	On	Auto	On
PORT4	Enable	On	Auto	On	PORT18	Enable	On	Auto	On
PORT5	Enable	On	Auto	On	PORT19	Enable	On	Auto	On
PORT6	Enable	On	Auto	On	PORT20	Enable	On	Auto	On
PORT7	Enable	On	Auto	On	PORT21	Enable	On	Auto	On
PORT8	Enable	On	Auto	On	PORT22	Enable	On	Auto	On
PORT9	Enable	On	Auto	On	PORT23	Enable	On	Auto	On
PORT10	Enable	On	Auto	On	PORT24	Enable	On	Auto	On
PORT11	Enable	On	Auto	On					
PORT12	Enable	On	Auto	On					
PORT13	Enable	On	Auto	On	M1	-------	---	-----	---
PORT14	Enable	On	Auto	On	M2	-------	---	-----	---

Trunk Configuration

On this screen, you are able to configure the trunk groups. As many as seven trunk groups can be configured, and you can arbitrarily select up to four ports (port 1 – port 24 or port 25 – port 26) to create a trunk group.



Trunk Configuration

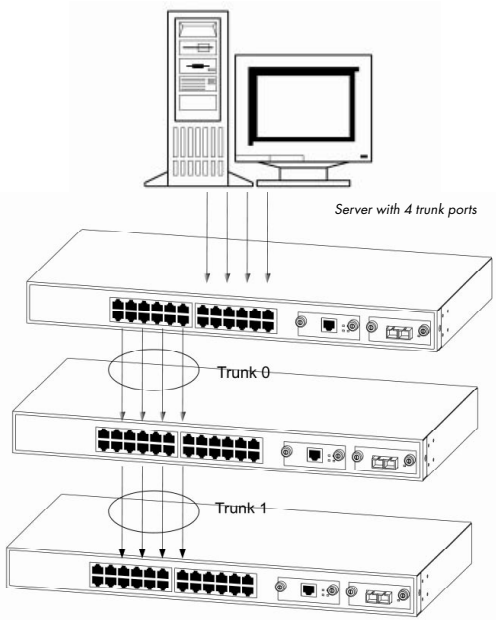
		T 1	T 2	T 3	T 4	T 5	T 6	T 7		T 1	T 2	T 3	T 4	T 5	T 6	T 7
Trunk 1 : Disable	PORT1	-	-	-	-	-	-	-	PORT13	-	-	-	-	-	-	-
Trunk 2 : Disable	PORT2	-	-	-	-	-	-	-	PORT14	-	-	-	-	-	-	-
Trunk 3 : Disable	PORT3	-	-	-	-	-	-	-	PORT15	-	-	-	-	-	-	-
Trunk 4 : Disable	PORT4	-	-	-	-	-	-	-	PORT16	-	-	-	-	-	-	-
Trunk 5 : Disable	PORT5	-	-	-	-	-	-	-	PORT17	-	-	-	-	-	-	-
Trunk 6 : Disable	PORT6	-	-	-	-	-	-	-	PORT18	-	-	-	-	-	-	-
Trunk 7 : Disable	PORT7	-	-	-	-	-	-	-	PORT19	-	-	-	-	-	-	-
	PORT8	-	-	-	-	-	-	-	PORT20	-	-	-	-	-	-	-
	PORT9	-	-	-	-	-	-	-	PORT21	-	-	-	-	-	-	-
	PORT10	-	-	-	-	-	-	-	PORT22	-	-	-	-	-	-	-
	PORT11	-	-	-	-	-	-	-	PORT23	-	-	-	-	-	-	-
	PORT12								PORT24							

NOTE: The 10/100 Mbps port cannot be trunked with a gigabit port; plus, all ports in the same trunk group will be treated as a single port.

If a VLAN group is being used, all of the members in a trunk group must be in the same VLAN group.

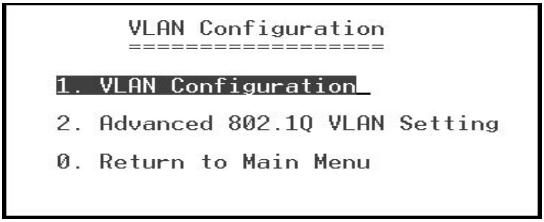
Cascaded Connection

By utilizing a combination of three 24-port Fast Ethernet Rackmount Web-Smart Switches and a single 4-port server (as shown in the figure at right), each 24-port Smart Switch is able to support two trunks, with each trunk allowing as many as four ports to be available for use in a cascaded connection.



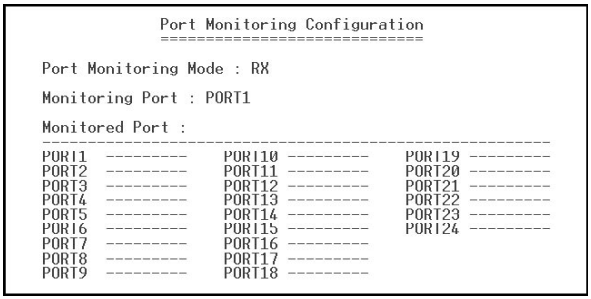
VLAN Configuration

VLAN (virtual local area network) is a logical network group that limits the broadcast domain. It allows you to isolate network traffic so only members of the VLAN receive traffic from the same VLAN members. Basically, creating a VLAN within a switch is logically equivalent to reconnecting a group of network devices to another Layer 2 switch. However, all the network devices are still physically plugged into the same switch.



Port Monitoring Configuration

Port monitoring is forwarding specified direction of packets from several monitored ports to a specified monitoring port.


Port Monitoring Configuration
Port Monitoring Mode : RX
Monitoring Port : PORT1
Monitored Port :
PORT1 PORT2 PORT3 PORT4 PORT5 PORT6 PORT7 PORT8 PORT9
PORT10 PORT11 PORT12 PORT13 PORT14 PORT15 PORT16 PORT17 PORT18
PORT19 PORT20 PORT21 PORT22 PORT23 PORT24

QoS Configuration

On this screen, you're able to configure the QoS (Quality of Service) mode, static port priority and 802.1p priority.

```
                QoS Configuration
                =================

QoS Mode : High : Low = 3 : 1

Static Port Ingress Priority :
-----------------------------------------
PORT1   Off     PORT10  Off     PORT19  Off
PORT2   Off     PORT11  Off     PORT20  Off
PORT3   Off     PORT12  Off     PORT21  Off
PORT4   Off     PORT13  Off     PORT22  Off
PORT5   Off     PORT14  Off     PORT23  Off
PORT6   Off     PORT15  Off     PORT24  Off
PORT7   Off     PORT16  Off
PORT8   Off     PORT17  Off
PORT9   Off     PORT18  Off

802.1p Priority [7-0] :
High High High High Low  Low  Low  Low
```

Bandwidth Control

On this screen, you're able to configure the input rate or the output rate of each port. If, for example port 1 is 10 Mbps, you can set its effective output rate to 1 Mbps and its input rate to 500 kbps.

```
                Bandwidth Control
                =================

Port    InRate  OutRate       Port    InRate  OutRate
------------------------      ------------------------
PORT1   0       0             PORT13  0       0
PORT2   0       0             PORT14  0       0
PORT3   0       0             PORT15  0       0
PORT4   0       0             PORT16  0       0
PORT5   0       0             PORT17  0       0
PORT6   0       0             PORT18  0       0
PORT7   0       0             PORT19  0       0
PORT8   0       0             PORT20  0       0
PORT9   0       0             PORT21  0       0
PORT10  0       0             PORT22  0       0
PORT11  0       0             PORT23  0       0
PORT12  0       0             PORT24  0       0
```

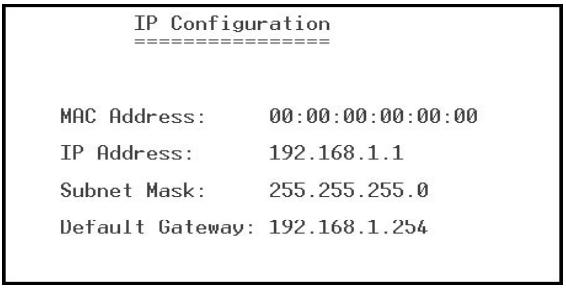
Miscellaneous Operation

This menu lets you access additional commands/configuration options, with Password Setting, Restore System Default Setting, Reboot System and Return to Main Menu leading to exactly those options. In addition, Advanced Switch Configuration lets you alter parameters for functions such as BSF, collision retry, age-out time and more; System Information offers details on firmware version, chip revision and such. (Section 5 addresses IP Configuration.)

```
                Misc Operation
                ==============

1. Advanced Switch Configuration

2. Password Setting

3. Restore System Default Setting

4. Reboot System

5. System Information

6. IP Configuration

0. Return to Main Menu
```

5. WEB LOGIN

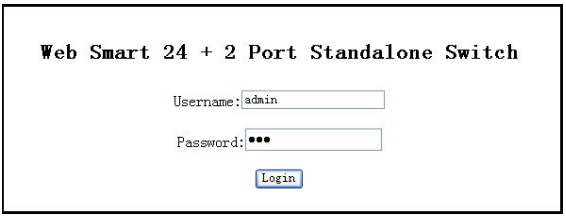
Setting IP Addresses by Console Port



Logging in Web pages requires setting the proper IP address. If using the default IP address — 192.168.1.1 — first be sure that this IP will work in your network environment. Otherwise, the IP address, subnet mask and default gateway need to be reconfigured: Log in with the console port, then go to the IP Configuration screen and set the proper IP address.

Logging In with a Web Browser

When you connect to the Smart Switch with a Web browser, a login screen is displayed. Simply enter a username and password to log in to access the switch.



6. SPECIFICATIONS

Standards

IEEE 802.3 (10Base-T Ethernet)

IEEE 802.3u (100Base-TX Fast Ethernet)

IEEE 802.3x (flow control and back-pressure)

IEEE 802.1q (tag-based VLAN)

IEEE 802.1v (port-based VLAN)

General

ANSI/IEEE 802.3 NWay auto-negotiation

Non-blocking, store-and-forward switching architecture

Connectors: 24 10/100 Mbps RJ-45 ports, SMII/GMII interface for optional Gigabit modules, RS-232 console port

Switch architecture: store-and-forward switch technology

Network cables: Cat3, 4, 5 (UTP/STP)

Performance

Filter/forward rate

- 10BaseT: 14,880 pps (packets per second)
- 100Base-TX: 148,800 pps (packets per second)
- 1000Base-T/SX: 1,480,000 pps (packets per second)

MAC address entries: 14000 with Auto Learning

Buffer size: 512 kBytes

Available Modules

1000Base-T Gigabit Ethernet Module Item 505109 (Copper)

1000Base-SX Gigabit Ethernet Module Item 505116 (Fiber)

LEDs

Power

LINK/ACT for each port

Power Input

Internal power supply: 100 – 240 V AC, 50/60 Hz

Power consumption: max. 35 W

Environmental

Dimensions: 440 (W) x 184 (D) x 44 (H) mm (17.32 x 7.3 x 1.75 in.)
Weight: 2.3 kg (5.1 lbs.)
Operating temperature: 0 – 45°C (32 – 113°F)
Operating humidity: 10 – 90%, non-condensing
Safety & EMI certificates: FCC Class A; CE Mark Class A

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